HYDROLOGY

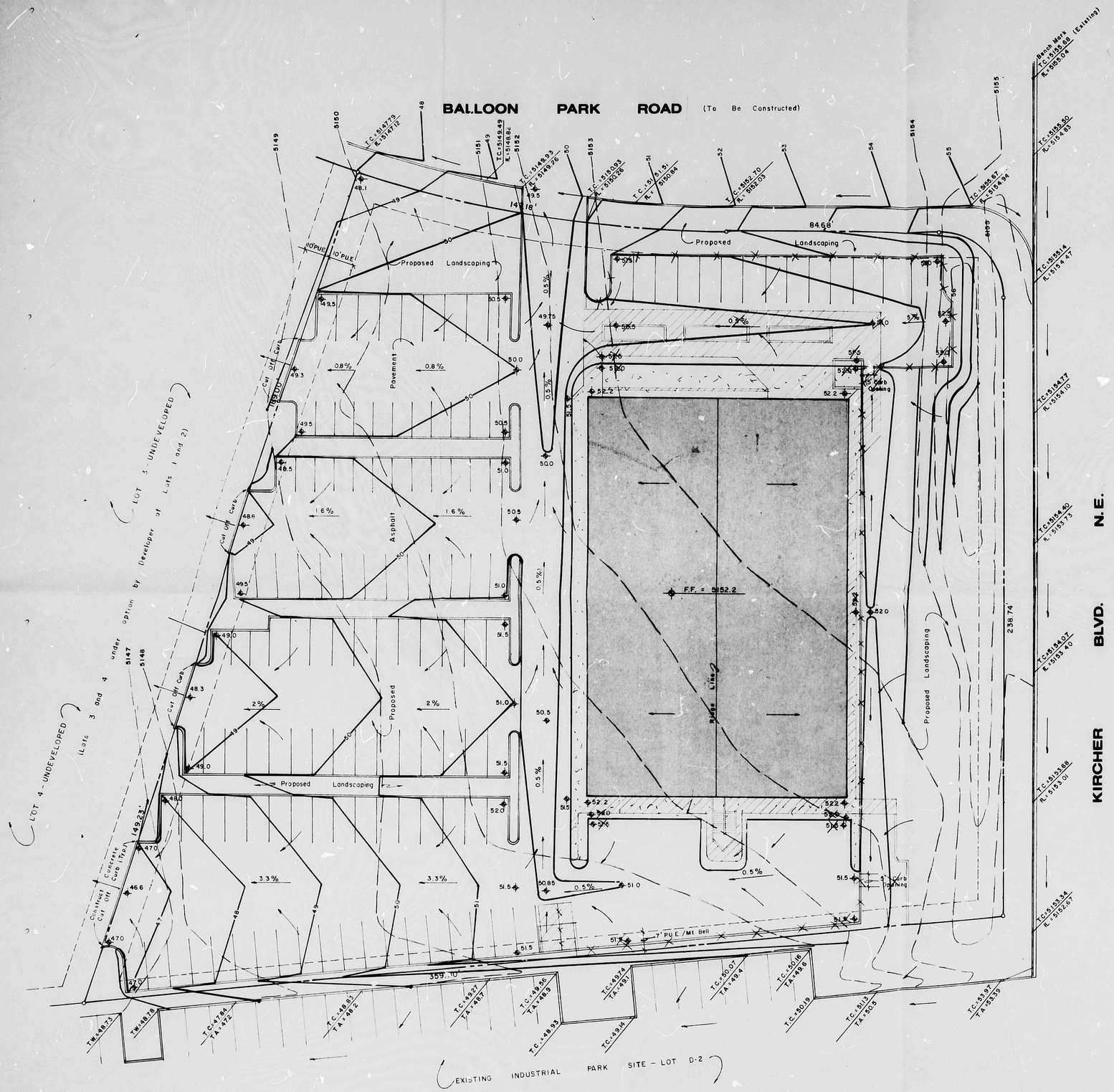
E17/D19c

TWO PLANS

2 PLANS

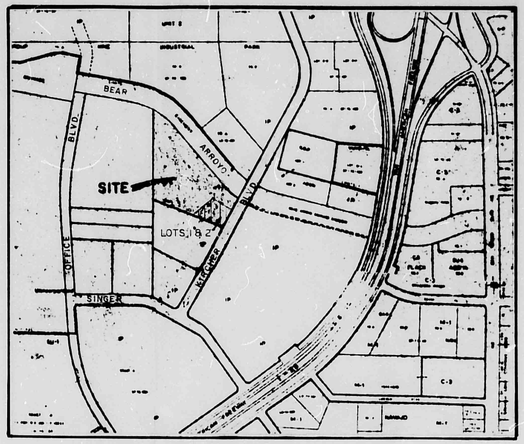
SUMA NUCLEAR
PHARMACY

EM-D22C



GRADING & DRAINAGE PLAN

1" = 20'



LOCATION MAP - E-17 & F-17

NOTES:

LEGAL: Lots 1 and 2, Balloon Field Industrial Park, Filed June 11, 1981, Bernalillo County, New Mexico. (Area = 2.0 Acres)

Survey: Topo by N. Mex. Registered Surveyor, Steve Walker, 8-81

Drainage: All Flows either directly to Street or thru adjacent Lots to Street for Discharge into Bear Arroyo System, per approved Drainage Plan for Balloon Field Industrial Park. Lot 1 to drain to Balloon Park Road. Lot 2 to drain thru Lots 3 and 4 to Balloon Park Court.

Bench Mark: Proposed T.C. at Property Line extension of West Boundary of Lot 2, (5147.79). Or T.C. Scribe at Corner of Balloon Park Road and Kircher Blvd. Elevation = 5155.68

B.M. = M.H. Rim at Singer and Kircher Blvds. Elevation = 5144.07

ITEMS MARKED OUT (X) HAVE BEEN DELETED FROM ORIGINAL PLAN.

INDICATES ADDITIONS TO ORIGINAL PLAN

LEGEND

51.5 x	Existing Spot Elevation
5154	Existing Contour
5154	Proposed Finished Contour
55.0	Proposed Finished Spot Elevation
	Surface Flow Direction
	All T.C.'s 0.5' above Pavement Elevation
51.5	Pavement Elevation

Prepared by:
Consultants terrasol inc.

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AUG 02 1985
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Sandy Eeds AIA Architect
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87102 505 842 1511

ARCHITECT

STATE OF NEW MEXICO
SANDY EEDS
REGISTERED ARCHITECT

ENGINEER

JOHN CHRISTOPHER
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

PROJECT

ENERPHARM HEADQUARTERS BLDG
BALLOON PARK ROAD AND KIRCHER BLVD
ALBUQUERQUE, NEW MEXICO

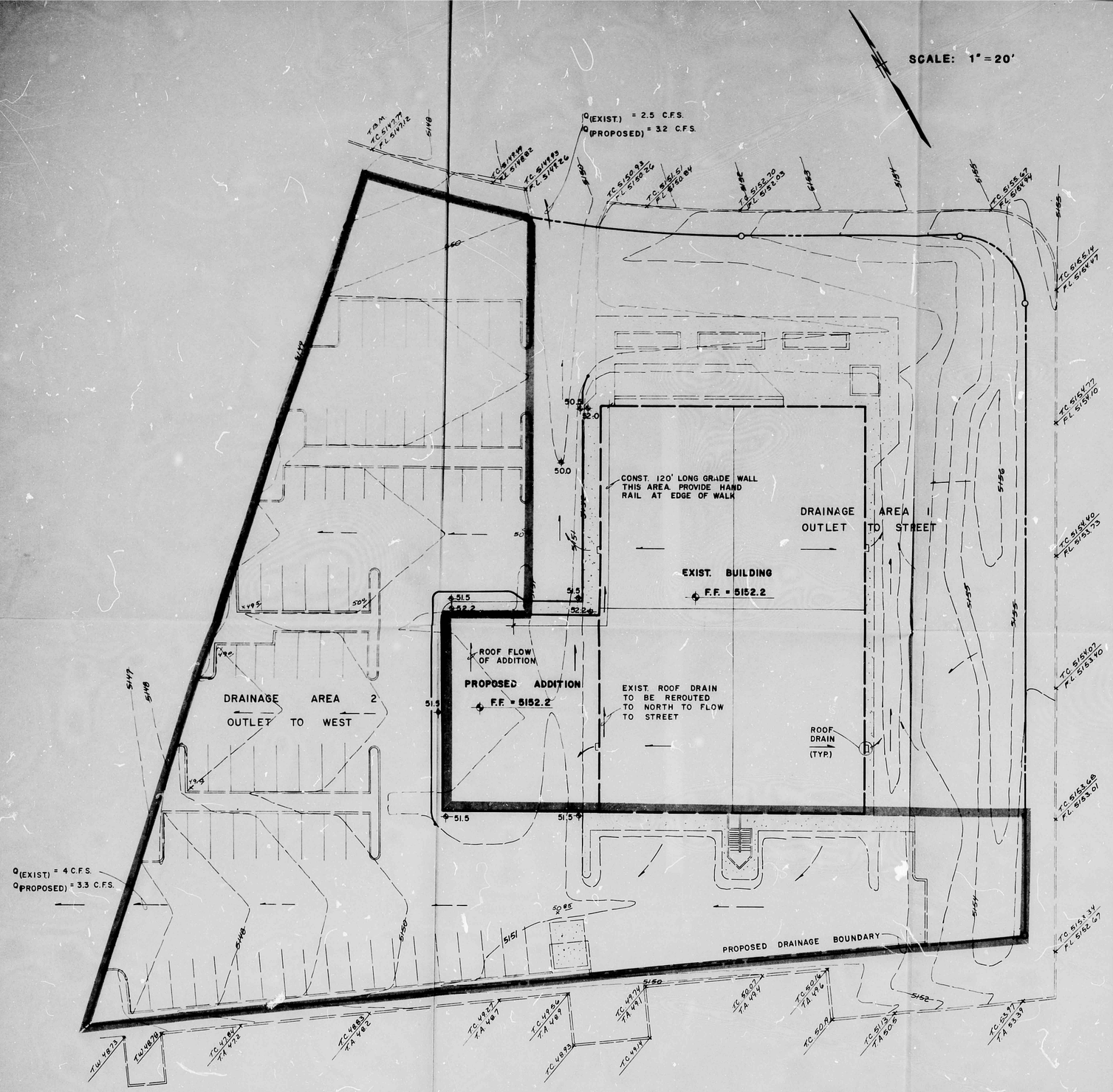
SHEET TITLE
GRADING & DRAINAGE PLAN

REVISIONS
11-24-81 ADD EXT STAIR
JMT

DATE DEC 1st 1981

PROJECT NO. 8111

SHEET NO.
C 2

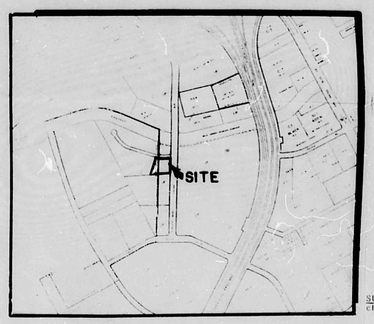


LEGEND

- SIDEWALK, CURB & GUTTER (EXISTING, PROPOSED)
- PROPOSED ASPHALT
- BUILDING (EXISTING, PROPOSED)
- PROPERTY LINE
- 12./x — EXISTING SPOT ELEVATION
- EXISTING CONTOUR
- 12.6 — PROPOSED SPOT ELEVATION
- 10 — PROPOSED CONTOUR
- SURFACE FLOW DIRECTION (EXISTING, PROPOSED)
- L.A. — LANDSCAPED AREA
- T.G.W. — TOP OF GRADE WALL (LESS THAN 18" HIGH)
- T.R.W. — TOP OF RETAINING WALL (MORE THAN 18" HIGH)
- T.A. — TOP OF ASPHALT
- T.C. — TOP OF CURB
- F.L. — FLOW LINE
- F.F. — FINISHED FLOOR

CONSTRUCTION NOTES:

1. Before construction, the Contractor shall check and verify pertinent figures shown hereon and shall make all applicable field measurements. Should any conflict, error or discrepancy be discovered, the contractor shall notify the Engineer at once to resolve the problem. It is recommended that the Contractor meet with the Engineer for a pre-design conference to discuss the scope of work and critical areas involved.
2. The Contractor shall be responsible for following the plans using his best skill and attention. Any departure from the plans must be approved by the Engineer and the City Hydrology Department prior to construction.
3. The Contractor shall check the site plan for locations of existing utilities within or adjacent to streets and shall take all necessary precautions and efforts to locate and protect these utilities. He shall give 48 hours notice to Line Locating Service, 765-1234, for any work that may interfere with said utilities.



VICINITY MAP E-17-Z

FLOOD HAZARD BOUNDARY MAP

SCOPE:

The proposed improvements are comprised of an addition to a medical office building in an area now used for parking. The arrangement of the parking area will change slightly. All proposed improvements occur west of the existing building.

The present site is bounded by Kircher & Balloon Park Streets on the north & east, by an industrial park site on the south, and by an office bldg. on the west.

The intent of this plan is to show:

a) Grading relationships between the existing ground elevations and proposed finished elevations in order to facilitate positive drainage to designated discharge points.

b) The extent of proposed site improvements, including buildings, walks and pavement.

c) The flow rate/volume of rainfall runoff across or around these improvements and methods of handling these flows to meet City requirements for drainage management.

d) The relationship of onsite improvements with existing neighboring property to insure an orderly transition between proposed and surrounding grades.

GENERAL NOTES:

LEGAL: Lots 1 & 2, Balloon Field Industrial Park, Albuquerque, N.M.

SURVEYOR: Topography originally done by Steve Walker Survey Co. in August, 1981 with as-built information added later.

B.M.: Manhole Rim located at the intersection of Singer & Kircher Blvds. Elevation = 5144.07.

T.B.M.: Top of curb at extension of west boundary line. Elevation = 5147.79.

SOILS: SCS Soils Map #21, soil type EMR, soil Hydrologic Group 'B'.

FLOOD HAZARD: According to FEMA Map #16, site is not located in or adjacent to a flood hazard zone.

OFF-SITE DRAINAGE: Offsite flows were accounted for when the original drainage plan was approved. The building addition will not add to any offsite flows, but will merely re-route internal flows so that more discharge is directed to the street instead of the west.

CALCULATIONS: Calculations are based on previously approved grading/drainage plan for lots 1 & 2. Submitted Dec. 1, 1982.

RATIONAL METHOD - Q = CIA

Area of site: 87,350 sq.ft. = 2.0 Ac.

Run-off Coefficient:

Existing site:	Developed Site:
A imp. = 1.41 Ac	A imp. = 1.43 Ac
% imp. = 71%	% imp. = 71%
"C" = 0.70 (DPM 22.2 C-1)	"C" = 0.70 (DPM 22.2 C-1)

Rainfall Intensity:

$I = P\ (6.84)\ Tc^{-0.51} = 4.65"$ per hour
where $P_6 = 2.2"$ (DPM 22.2 D-1)
$T_c = 10$ minutes

Existing Condition:	Developed Condition:
Area 1	Area 1
$Q_{100} = (0.70)(4.65)(0.78) = 2.5$ cfs	$Q_{100} = (0.70)(4.65)(0.97) = 3.2$ cfs
$V_{100} = (2.5)(50)(60\ sec/in)/2 = 3,750\ ft^3$	$V_{100} = (3.2)(50)(60)/2 = 4,736\ ft^3$
Area 2	Area 2
$Q_{100} = (0.70)(4.65)(1.22) = 4$ cfs	$Q_{100} = 0.70\ (4.65)(1.03) = 3.3$
$V_{100} = 6,000\ ft^3$	$V_{100} = 4,950\ ft^3$

SUMMARY: Present site flow patterns are divided into the following characteristics:

1. The area draining to the street includes the NW, NE and SE quadrants of the present building, the north and east landscaped portion adjacent to the building, and the access street on the west side of the building. This area totals 0.78 acres.
2. The area draining to the west includes the SW quadrant of the present building, the south paved area adjacent to the building and all of the paved parking to the west of the building. This area totals 1.22 acres.

The addition to the building will redirect flows to the street being generated by SW quadrant of the present building and that portion of the parking area covered by the proposed building. The net effect will be to increase the drainage area discharging to the street and reduce the area discharging to the west.

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RESUBMITTAL 11-1-85:
REVISED FLOW PATTERNS TO REFLECT INCORRECT EXISTING GRADES SOUTH SIDE OF PROPOSED ADDITION.

CHRIS WEISS — 11-1-85 DATE

WEISS-PINES ENGINEERING INC.
1100 ALVARADO N.E. SUITE B
ALBUQUERQUE, NEW MEXICO 87110
(505) 266 - 3404

REVISIONS	DATE

DESIGNED
DRAWN
CHECKED

DRAINAGE / GRADING PLAN
SUMA NUCLEAR PHARMACY
4272 BALLOON FIELD ROAD

ENGINEERING

CHRISTOPHER J. WEISS — NEW MEXICO — 6844 — PROFESSIONAL ENGINEER

SHEET 1 OF 1